DETERMINANTS OF POVERTY (CROSS COUNTRY EVIDENCE).

Misbah Nosheen  
Assistant Professor Economics department Hazara University Mansehra

Dr Javed Iqbal  
Assistant Chief, Planning Commission Government of Pakistan

Shabana parveen  
Lecturer Economics department Hazara University Mansehra

Tasawer Aslam  
Lecturer Education department Hazara University Mansehra

Abstract
This paper shows in a cross-section empirical framework, some preliminary results on the relationship between macroeconomic factors and poverty in selected South Asian and Latin Americans developing countries. The macroeconomic variables examined include public expenditure, inflation, income levels and output growth, and the real exchange rate. In addition, several structural variables are also considered. The data set is from 1990 to 2009. The estimation method is a simple cross-section, time-series OLS regression model with fixed effects. The evidence proved in this study show that countries that have been successful in terms of economic growth are also very likely to have been successful in reducing poverty. The evidence suggests strongly that open trade and investment policies alone are not sufficient for poverty reduction. These have to be accompanied by a host of other sound policies.

Key words: Poverty, Cross section, growth, fixed effects

1. INTRODUCTION

Poverty has many dimensions, for example undernourishment, no shelter, illness, illiteracy, unemployment and uncertain future. Poverty is losing a kid to illness due to the infected water. Lack of representation and freedom and powerlessness, is another name of poverty. Poverty has several types varying from time to time and place to place has been exposed in different ways.
Poverty is the inability to maintain a minimum living standard anticipated with respect to basic consumption needs or some amount of income required for satisfying them [World Bank (2006)].

The size of the global poor is rural. The most important fraction of their expenditure is in general on staple food. They have little assets such as land and others, lack of schooling and face lots of interconnecting obstacles to develop. Approximately 1.2 billion people globally expend less than a standard; “dollara-day”; and are in “dollar poverty”; 44 percent in South Asia about 24 percent each in Sub-Saharan Africa and East Asia and 32 percent in Latin America and the Caribbean. Almost 75 percent of the dollar poor lived and worked in rural areas in 2001. [IFAD (2001)].

Main objectives of paper are:

1. Identify the main causes of poverty.
2. Explain how regression techniques may be used to identify the proximate causes of poverty and their relative importance.

The contribution of this paper, apart from using recent data for a cross country analysis, is that it looks into uncovering the determinants of poverty econometrically. These determinants will have important poverty alleviation policy implications.

The organization of the paper is as follows: Section 2 describes literature review, Section 3 details the of data and methodology used, while results of regression analysis are in Section 4 and Section 5 concludes the paper with discussion on possible policy implications of the results.

2. LITERATURE REVIEW

The literature on poverty can be divided into theoretical and empirical approaches. Theoretical approaches focus mostly on the types of poverty or different social aspects of poverty. The
empirical literature investigates evidence of the relationship between underlying variables based on observed statistics.

Ellis (1984) takes a theoretical approach to describing different types of poverty. Here, the nature of poverty is examined in relation to a model of causes affecting the welfare of a community, suggesting that it is possible to operationally distinguish among four major dimensions of poverty: economic, social, political, and legal. The study also discusses further aspects of poverty, stating that the classification of poverty into different types can help in understanding the problems faced by the community.

Ravallion (2001) describes the techniques used by the World Bank to measure poverty. The selected common poverty line (US$1 a day) typically prevails in low-income countries. This poverty line is converted into the local currency for consumption surveys by using purchasing power parity (PPP) exchange rates. Ravallion (2003) explains how different measures used for poverty or any other variable can lead to dissimilar results; if the approaches used are different, then their results cannot be considered legitimate.

Squire (1993) reviews efforts to reduce poverty in the developing world. The study uses country- and regional-level figures for poverty headcount, growth, and health measures to compare these efforts, concluding that (i) economic growth should be encouraged to induce the productive use of labor so that the poor can earn to escape poverty, (ii) public spending is an important source of improving health and educational attainment among the poor, and (iii) the provision of subsidized social services is better than direct cash transfers. The study does not use an estimation model to observe the effects of social indicators such as education and health on poverty.
Ravallion and Datt (1996) decompose growth on the basis of sector output to determine the impact of the growth of different sectors on poverty. They show that the growth of the primary and tertiary sectors has contributed to a reduction in both urban and rural poverty, while the secondary sector has not delivered much to India’s poor. They suggest fostering the growth of the primary and tertiary sectors to reduce poverty. However, they do not point to the alternative of enabling the poor to gain from the secondary sector by providing them with the skills and education that the sector requires, i.e., more skilled labor than the primary sector.

Barro (1996) uses panel data for 100 countries to test certain empirical theories related to growth. He uses the 3SLS technique for different constructed equations with different instrumental variables in each. His results show that, for a given level of per capita gross domestic product (GDP), the growth rate is positively affected by a higher initial level of schooling. Krueger and Lindahl (2001) attempt to reconcile the micro-econometric and empirical macro-literature on the effect of schooling on income and GDP. They show that the micro-level positive relationship between education and income is also true at a cross-country level.

Harper, Marcus, and Moore (2003) provide a comprehensive review of the literature on poverty reduction. Their discussion covers a number of key social processes that affect poverty. They also highlight the significance of education as a means of poverty reduction, and argue that a good-quality formal education widens horizons and increases future employment opportunities. They conclude that education can facilitate upward economic and social mobility, a better-paying and safer job, and general wellbeing. This conclusion confirms the importance of education in breaking different aspects of the poverty cycle, ranging from individual earning to parental and family effects.
The literature review leads us to some important conclusions. For example, education can increase an individual’s earnings by enhancing productivity and thus can significantly help reduce poverty. Second, the impact of education on poverty does not work only via income or a productivity mechanism (direct impact) but also through a number of externalities (indirect impact), e.g., through reduced infant mortality, better decisions, improved health and parental education, etc. Third, the impact of determinants of poverty can vary across regions due to a number of factors including economic circumstances, labor market requirements and the level and quality of education.

3. DATA AND METHODOLOGY

This section presents, in a cross-section empirical framework, some preliminary results on the relationship between macroeconomic factors and poverty in selected South Asian and Latin Americans developing countries. The macroeconomic variables examined include public expenditure, inflation, income levels and output growth, and the real exchange rate. In addition, several structural variables are also considered. The data set is from 1990 to 2009. The estimation method is a simple cross-section, time-series OLS regression model with fixed effects.

The dependent variable is the logarithm of the poverty rate (POV), measured by the poverty gap for the population as a whole. The explanatory set of variables used in the regressions is defined as follows.

- **INF** is the inflation rate in consumer prices;

- **SUB_GDP** is the log of the ratio of total subsidies and other current transfers over GDP, which aims at capturing level effects of changes in public spending;
- **ILL** is the youth illiteracy rate in percent of the population aged 15-24, which aims to capture the level of education of the labor force;

- **HOS** is the log of hospital beds per 1,000 persons, which measures overall health conditions;

- **GDP** is GDP per capita at PPP exchange rates, which captures the level of economic development;

- **GDPGR** is the annual growth rate of GDP per capita, measured at PPP exchange rates, which can be viewed as either a proxy for the rate of return on investment, or as a measure of cyclical movements in output;

- **EXC** is the annual rate of change of the real exchange rate (defined such that an increase is a depreciation);

- **URB** is the log of the relative share of the urban population in proportion to total population;

- **TOT** is the log of the terms of trade;

- **VEXC, VINF and VGDP** are measures of macroeconomic volatility, which consist of rolling standard deviations of the real exchange rate, inflation, and real GDP;

- **IMEX** is the ratio of the sum of imports and exports of goods and services in percent of GDP, and aims to capture exposure to external shocks.

Theoretically it is suggested that inflation should have a positive effect on poverty. The poor are more exposed to inflation than higher-income groups as a result of a various reasons. For example their income is often defined in nominal terms, and they often do not benefit from indexation mechanisms. In periods of high inflation, therefore, the purchasing power of their
resources may fall. Moreover they have few real assets, such as land, and usually no indexed financial assets-with which to protect themselves from the effect of price increases. The fiscal variables, subsidies and current transfers as a proportion of GDP have a priori an ambiguous effect. The effect of an across-the-board cut in transfers and subsidies, for instance, may be negative; but to the extent that it is accompanied by better targeting, there may be no significant effect on the poverty rate. An increase in the illiteracy rate is expected to be positively correlated with poverty, whereas an improvement in health indicators should be inversely related to poverty. Both the level of GDP per capita and its rate of growth are expected to be negatively correlated with the poverty rate. The effect of real exchange rate depreciation is in general ambiguous; it is likely to lead to a reduction in poverty if it benefits small farmers in the tradable sector, as is the case in many low-income developing countries. A higher rate of urbanization also has in general an ambiguous effect on aggregate poverty; to the extent that rural-to-urban migration translates into greater access to public services in urban areas, it may lower poverty; but to the extent that inflows of workers in the urban sector lead to an excess supply of labor in the informal sector and lower wages there, it may increase poverty. An improvement in the terms of trade may reduce poverty if it represents an increase in the relative price of agricultural commodities (thereby benefiting small farmers in rural areas) or a fall in the price of imported consumption goods (benefiting mostly households in urban areas). An increase in macroeconomic volatility (associated with output shocks, inflation, or fluctuations in the real exchange rate) is expected to increase poverty, possibly through its adverse effect on growth, as discussed earlier. Finally, the degree of openness has a priori an ambiguous effect on poverty.
4. ANALYSIS AND RESULTS

Table 1 summarizes some of the basic empirical results. They indicate that inflation, GDP growth, total subsidies and other current transfers over GDP ratio, exchange rate, volatility of exchange rate, volatility of inflation and volatility of GDP do not have a statistically significant impact on poverty.

Table 1: Determinants of Poverty Rate
(OLS with fixed effects)

<table>
<thead>
<tr>
<th>Dependent variable: Log of poverty gape</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>INF</td>
<td>-0.104 (-0.659)</td>
<td>0.040 (0.234)</td>
<td>-0.214 (-2.141)</td>
<td>-0.219 (-2.182)</td>
<td></td>
</tr>
<tr>
<td>ILL</td>
<td>-0.569 (-1.606)</td>
<td>-0.491 (-1.107)</td>
<td>-0.652 (2.608)</td>
<td>-427 (0.217)</td>
<td></td>
</tr>
<tr>
<td>HOS</td>
<td>0.215 (1.118)</td>
<td>0.292 (0.604)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GDP</td>
<td>-0.439 (-1.827)</td>
<td>-0.613 (-2.109)</td>
<td>-0.306 (-2.160)</td>
<td>-0.275 (-1.889)</td>
<td></td>
</tr>
<tr>
<td>GDPGR</td>
<td>-0.005 (0.0289)</td>
<td>-0.003 (-0.131)</td>
<td>-0.021 (-0.631)</td>
<td>0.003 (0.129)</td>
<td>0.001 (0.941)</td>
</tr>
<tr>
<td>SUB_GDP</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EXC</td>
<td>0.123 (0.438)</td>
<td>-0.011 (-0.068)</td>
<td>0.034 (1.144)</td>
<td>0.193 (1.669)</td>
<td>0.2166 (1.827)</td>
</tr>
<tr>
<td>IMEX</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>URB</td>
<td>0.506 (0.861)</td>
<td>0.567 (0.370)</td>
<td>0.749 (1.663)</td>
<td>0.539 (0.950)</td>
<td></td>
</tr>
<tr>
<td>TOT</td>
<td>-0.027 (-2.368)</td>
<td>-0.024 (-1.663)</td>
<td>-0.012 (-1.035)</td>
<td>-0.029 (-2.608)</td>
<td>-0.029 (0.010)</td>
</tr>
<tr>
<td>VEXC</td>
<td>-0.0148 (0.961)</td>
<td></td>
<td>-0.014 (-1.001)</td>
<td>-0.013 (-0.959)</td>
<td></td>
</tr>
<tr>
<td>VINF</td>
<td>0.015 (0.7332)</td>
<td>0.172 (0.696)</td>
<td>0.002 (0.061)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VGDP</td>
<td></td>
<td></td>
<td>0.044 (0.904)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adj. R²</td>
<td>0.976</td>
<td>0.972</td>
<td>0.971</td>
<td>0.972</td>
<td>0.972</td>
</tr>
<tr>
<td>Number of obs</td>
<td>115</td>
<td>115</td>
<td>115</td>
<td>115</td>
<td>115</td>
</tr>
<tr>
<td>Std error of Regression</td>
<td>0.072</td>
<td>0.073</td>
<td>0.073</td>
<td>0.072</td>
<td>0.072</td>
</tr>
</tbody>
</table>

Note: Values in parentheses are t statistics
The fact that the level of inflation has incorrect sign and not significant may have far more to do with the way it has been defined and used in this analysis. Since it is picking up only the level of inflation in that year and the poverty levels are based on observations with different time intervals and hence reflecting changes over that time period as well as economic developments in that particular year, it would be difficult to isolate the impact of inflation in that year unless it was dramatically high.

The illiteracy rate, hospital beds and the volatility of exchange rate were not only insignificant, they also had the wrong sign.

The level of real GDP per capita and its growth rate have the expected negative sign and real GDP per capita is significant in all regressions. This implies that growth is an important determinant of poverty.

It is difficult to make much of the fact that public transfers and subsidies are not significant in the regressions; the reason is that our variable may not be adequate, because it does not measure very well what are the subsidies and transfers that actually go to the poor (it includes, for instance, transfers from the government to private and public enterprises).

The rate of depreciation of the real exchange rate also has a positive effect on poverty, which is in contrast with the view that improvements in the relative price of tradables benefit farmers producing exportables in the agricultural sector. The fact that the degree of openness has no significant effect on poverty in some regressions may result from the fact that greater access to imported capital goods leads firms to substitute away from unskilled labor in the production process, which results in an increase in unemployment which ultimately will tend to increase poverty. This is in accordance with the result given by Agenor (2002).
Urbanization has a positive sign and is significant in some regressions so we can say that inflows of workers in the urban sector lead to an excess supply of labor in the informal sector and lower wages there and as a result it increases poverty.

An improvement in the terms of trade can decrease poverty if it represents an increase in the relative price of agricultural commodities (thereby benefiting small farmers in rural areas) or a fall in the price of imported consumption goods (benefiting mostly households in urban areas). This is the case in our analysis. The coefficient has a negative sign and statistically significant almost in all cases.

An increase in macroeconomic volatility which may be in terms of output shocks, changes in inflation, or fluctuations in the real exchange rate is expected to increase poverty, most probably through its unfavorable effect on growth. Instability of inflation and the volatility of real GDP have expected sign but they are not significant. Volatility of exchange rate has the wrong sign.

Finally, the fixed effects (which are not reported here to save space) are all statistically significant, suggesting that country-specific factors are important in determining the behavior of poverty rates.

**5. CONCLUSION**

The purpose of this chapter has been to examine analytically and empirically the various variables affect poverty in developing countries.

The macroeconomic variables examined include public expenditure, inflation, income levels and output growth, and the real exchange rate. In addition, several structural variables are also considered. The data set is from 1990 to 2009. The estimation method is a simple cross-section, time-series OLS regression model with fixed effects.
The evidence proved in this study show that countries that have been successful in terms of economic growth are also very likely to have been successful in reducing poverty so government’s target on poverty-reduction must therefore create an environment that is beneficial to growth.

The international financial institutions now directly target poverty reduction through specific measures, rather than relying on growth to effect a reduction of poverty. This is reflected in a shift in their policy prescriptions and in their lending portfolio in favour of the social sectors.

The evidence suggests strongly that open trade and investment policies alone are not sufficient for poverty reduction. These have to be accompanied by a host of other sound policies. Developing countries need to ensure competitiveness of their enterprises in the global economy.
References


